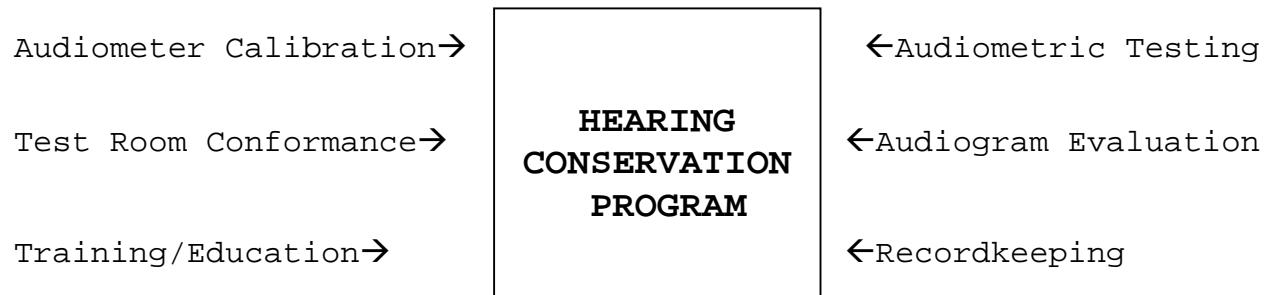


OCCUPATIONAL NOISE EXPOSURE HEARING CONSERVATION PROGRAM



Hearing Protection for
Employee with an STS

Prepared for Montana Employers
by the

Safety Bureau
Department of Labor and Industry
P.O. 1728
Helena, MT 59624-1728
(406) 444-6401

OCCUPATIONAL NOISE EXPOSURE ASSISTANCE GUIDELINE

GUIDELINE ONLY: THIS OCCUPATIONAL NOISE EXPOSURE COMPLIANCE GUIDELINE IS INTENDED AS A GUIDE TO ASSIST EMPLOYERS IN DEVELOPING AN INITIAL OCCUPATIONAL NOISE EXPOSURE PROGRAM OR FOR EVALUATING AN EXISTING OCCUPATIONAL NOISE EXPOSURE PROGRAM. COMPLETE TEXT OF OCCUPATIONAL NOISE EXPOSURE STANDARD MUST BE CONSULTED FOR COMPLIANCE WITH THE RULE.

OBTAIN A COPY OF OCCUPATIONAL NOISE EXPOSURE STANDARD, 29 CFR 1910.95.

The employer shall protect all workers from occupational noise exposure that exceeds an 8-hour time weighted average (TWA) of 90 decibels (dBA).

To protect workers the employer shall: (a) monitor noise exposure, (b) institute control measures, and (c) implement a hearing conservation program (HCP) when occupational noise exposure exceeds an 8-hour TWA of 85 dBA.

1910.95 (b)(1) states: When employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table. Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

OSHA Permissible Noise Exposure (Table G-16, 1910.95)

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼	115

MONITOR NOISE EXPOSURE

- Calibrate all sound measuring equipment before and after each use according to the manufacturer's instructions.
- Monitor noise to determine level of exposure to employees.
- Measure noise exposure levels with a dosimeter and/or a sound level measuring instrument with an A-weighting network.

CONTROLS

The employer shall institute engineering and/or administrative controls whenever possible. If these controls fail to reduce employee noise exposures to an 8-hour TWA of 90 dBA or less, then the employer shall provide and enforce the use of hearing protectors that attenuate employee exposure to at least an 8-hour TWA of 90 dBA.

ENGINEERING CONTROLS

- Use technology to reduce noise levels.
- Keep machinery in good maintenance repair to reduce noise.
- Erect total or partial barriers to confine noise.

ADMINISTRATIVE CONTROLS

- Limit employees scheduled work time in a noisy area.
- Limit noisy operations and activities per shift.

PERSONAL PROTECTIVE EQUIPMENT

- Provide at no cost to the employee a selection of hearing protection appropriate for noise levels in the environment.
- Provide training on the selection, fitting, use, and care of hearing protectors.
- Ensure that protectors are worn.

IMPLEMENT A HEARING CONSERVATION PROGRAM

To protect workers whose noise exposure equals or exceeds an 8-hour TWA of 85 dBA the employer shall implement a continuing, effective hearing conservation program (HCP).

MONITORING NOISE EXPOSURE

- Use only measuring instruments that meet the American National Standard Institute (ANSI) specifications.
- Use a sampling strategy that will pick up all continuous, intermittent, and impulsive sound levels from 80-130 dBA, and include all of these sound levels in the total noise measurement.
- Permit employees or their representatives to observe monitoring.
- Notify employees of noise exposure at or above 8-hour TWA of 85 dBA.

AUDIOMETER CALIBRATION

- Perform a biological calibration of the audiometer's functional operation by testing a person with known, stable hearing thresholds and listening to the audiometer's output to determine if there are distorted or unwanted sounds present.
- Acoustical calibration must be done at least annually and whenever a deviation of 10 dBA or greater is found during the biological check.
- An exhaustive calibration must be done at least every two years and whenever there is a 15 dBA change in the acoustic calibration of the audiometer.

TEST ROOM CONFORMANCE

Audiometric tests shall be administered in a room meeting OSHA requirements for background noise levels (see Appendix D in 29 Code of Federal Regulation (CFR) Part 1910.95).

AUDIOMETRIC TESTING

- Provide audiometric testing free of cost to employees with noise exposure equal to or above an 8-hour TWA of 85 dBA.
- Calibrate audiometer to meet ANSI standards.
- Use only a licensed or certified audiologist, otolaryngologist, other physician, or a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation or has demonstrated competence in performing audiometric testing.
- Precede baseline testing by at least 14 hours without workplace noise exposure.
- The use of hearing protectors during work hours may substitute for the 14 hour requirement.
- Establish a baseline within 6 months of first exposure or within one year if using a mobile van to test. Hearing protection must be worn from the sixth month until testing is performed.
- Obtain an audiogram annually from the baseline date.

AUDIOGRAM EVALUATION

- Compare subsequent audiograms to the baseline audiogram to determine if there is a change in hearing threshold of 10 dBA or greater in either ear to 2000, 3000, and 4000 Hertz (known as a standard threshold shift (STS)).
- Notify the employee in writing within 21 days if a determination of an STS is made.
- If an STS exists, the employer may retest the employee within 30 days and use the test results as the annual audiogram.
- Provide person performing the evaluation the following information: a copy of the OSHA requirements for hearing conservation; the baseline audiogram and the most recent audiogram of the employee to be evaluated; measurements of background sound pressure levels in the audiometric test room; and records of audiometric calibration.

FOLLOW-UP OF EMPLOYEES WITH A STANDARD THRESHOLD SHIFT

- Employees not already using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them.
- Employees already using hearing protectors shall be refitted and trained in their use and

provided with hearing protectors offering greater attenuation if necessary.

- The employee shall be referred for a clinical audiological evaluation or otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a medical pathology of the ear is caused or is aggravated by the wearing of hearing protectors.
- The employee is informed of the need for an otological examination if a medical pathology of the ear that is unrelated to the use of hearing protection is suspected.

TRAINING/EDUCATION

- Implement a training and education program for those employees whose noise exposure equals or exceeds 85 dBA.
- Repeat training/education program annually for employees included in HCP.
- Include in the training program the effects of noise on hearing; the purpose of hearing protectors, their advantages and disadvantages; attenuation of various hearing protectors, and instructions on how to select, fit, use, and care for them; and the purpose of audiometric testing and an explanation of the testing procedure.

ACCESS TO INFORMATION AND TRAINING MATERIALS

- Make available to affected employees or their representatives copies of the standard and also post a copy in the workplace.
- Provide copies of the HCP and training information to affected employees

RECORDKEEPING

- Audiometric test records shall include: name and job classification of employee, date of the test, examiner's name, date of the last acoustic or exhaustive calibration of the audiometer, and the employees' most recent noise exposure assessment.
- Retain audiometric test records for the duration of the affected employee's employment.
- Retain noise exposure measurement records for two years.
- Record and maintain test room background noise measurements.
- Provide access to audiometric test records and noise exposure measurement records upon request to the employee, former employees, employee's designated representative, and the Assistant Secretary of Labor for Occupational Safety and Health.

DEFINITIONS

ACCOUSTICAL CALIBRATION. A procedure by which an audiometer is checked to determine if it is producing the correct intensity level of pure tones, at specified frequencies, and that the signals are free for distortion and unwanted sounds.

ANSI. An abbreviation for the American National Standards Institute; a standards making body.

ANNUAL AUDIOGRAM. An audiogram performed yearly following a baseline audiogram.

AUDIOLOGIST. A professional specializing in the study and rehabilitation of hearing, who is certified by the American Speech-Language-Hearing Association and licensed by a state board of examiners.

AUDIOMETER. An electroacoustical generator of pure tones at selected hearing frequencies and of calibrated output used for the purpose of determining an individual's threshold of hearing.

A-WEIGHTED SOUND LEVEL METER. An instrument that measures sound pressure levels in decibels using an A-weighting network which attenuates low frequency sounds in a manner similar to the human ear.

BASELINE AUDIOGRAM. An audiogram against which future audiograms are compared.

BIOLOGICAL CALIBRATION. An audiometer calibration that tests the audiometer's output using an adult with known normal hearing who has not been exposed to noise and has no history of ear disease.

CALIBRATE. To check noise measurement equipment and audiometric testing equipment for accuracy and uniformity.

DBA. An abbreviation for decibels measured with a sound level measuring instrument with an A-weighting network.

DECIBEL (dB). Unit of measurement of sound pressure level.

EXHAUSTIVE CALIBRATION. A procedure by which an audiometer is sent to a laboratory or manufacturer's factory for actual adjustments to conform to the ANSI S.3.6 Standard.

HERTZ (Hz). A unit of frequency; synonymous term for cycles per second.

NOISE DOSIMETER. An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

OTOLARYNGOLOGIST. A physician specializing in diagnosis and treatment of disorders of the ear, nose, and throat.

SOUND LEVEL METER. An instrument for the measurement of sound level.

TIME-WEIGHTED AVERAGE SOUND LEVEL. That sound level, which if constant over an 8-hour exposure, would result in the same noise dose as is measured.

State Occupational Safety and Health Consultation Project

A source of assistance with construction and general industry safety and health is the Montana Onsite Consultation Project. This division of the Department of Labor and Industry operates independently of OSHA's enforcement branch. The program was developed with small businesses in mind, and is available to private sector employers who want help in recognizing and correcting jobsite hazards.

When an employer uses the service, a trained occupational safety and health professional conducts a free onsite "inspection" and consultation. No citations or penalties are given for any of the problems that the inspector/consultant may find, and the service is completely confidential. The employer has the responsibility and obligation through the program to correct the identified hazards within an allotted amount of time. In addition, the consultant can assist in developing and maintaining an effective safety program, offer jobsite training and education for employees, and help locate other sources of assistance for safety and health concerns.

Although this program can be beneficial, you must realize that there is still no guarantee that a jobsite that has received the consultation services will "pass" an OSHA inspection. For information about Montana's Onsite Consultation Project please contact:

Safety & Health Bureau
Department of Labor and Industry
P.O. Box 1728
Helena, MT 59624-1728
(406) 444-6401

Resources

Additional information about occupational safety and health standards and regulations can be obtained from:

1. U.S. Department of Labor, **Occupational Safety & Health Administration, (OSHA)**. Public Affairs Office- Room 3647, 200 Constitution Ave., Ashington, D.C. 20210.
Phone: 1-202-693-1999.
www.osha.gov

2. **National Institute for Occupational Safety and Health, (NIOSH)**. Department of Health and Human Services,
200 Independence Ave. SW 317B, Washington, DC 20201.
Phone: 1-800-356-4674, 1-800-35-NIOSH
www.niosh.gov

3. **American Conference of Governmental Industrial Hygienists, (ACGIH)**.
1330 Kemper Meadow Drive, Cincinnati, OH 45240-1634.
Phone: 1-513-742-2020, Fax: 1-513-742-3355
www.acgih.org

4. **American National Standards Institute, (ANSI)**.
11 West 42nd Street, New York, NY 10036.
Phone: 1-212-642-4900, Fax: 1-212-398-0023
www.ansi.org

5. **National Safety Council**,
1121 Spring Lake Drive, Itasca, IL 60143-3201
Phone: 1-630-285-1121, Fax: 1-630-285-1315
www.nsc.org

OSHA Regulations (Standards - 29 CFR): Occupational noise exposure. - 1910.95

9/30/1999

(a) Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows:

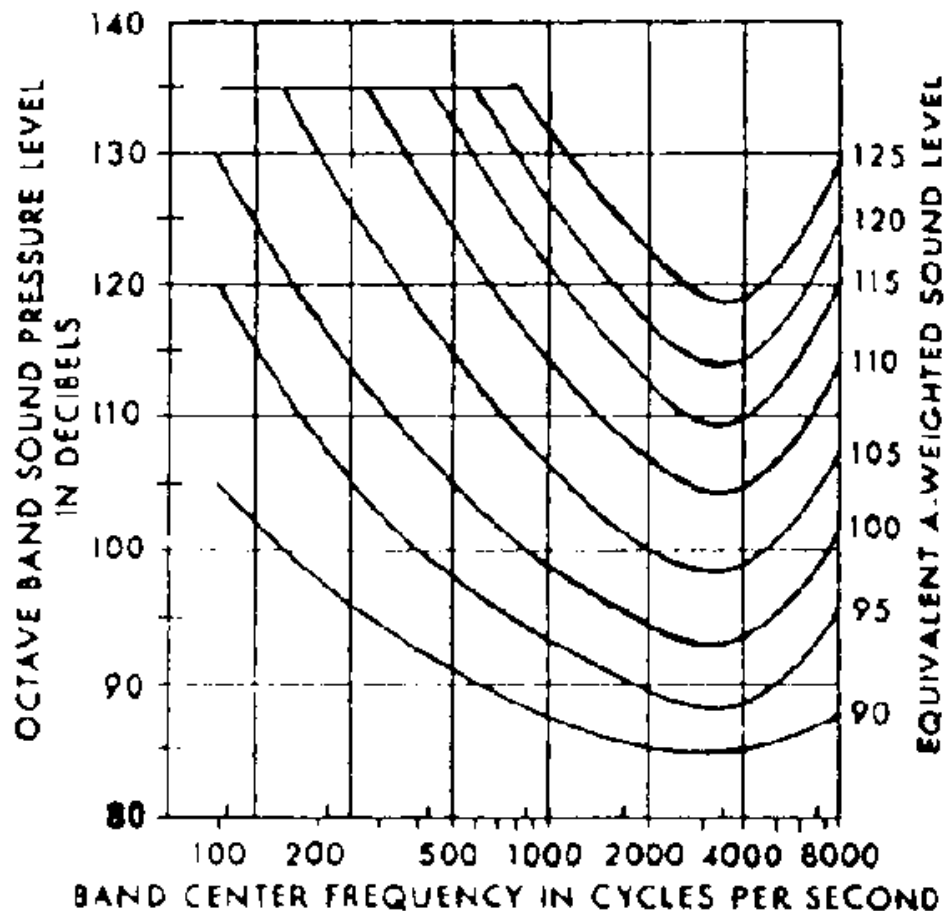


FIGURE G-9

FIGURE G-9 - Equivalent A-Weighted Sound Level

Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table 1.G-16.

(b)(1) When employees are subjected to sound exceeding those listed in Table G-16, feasible

administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

(b)(2) If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES (1)

Duration per day, hours	Sound level dBA slow response
8.....	90
6.....	92
4.....	95
3.....	97
2.....	100
1 ½	102
1.....	105
½	110
¼ or less.....	115

(1) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C(1)/T(1) + C(2)/T(2) + \dots + C(n)/T(n)$ exceeds unity, then, the mixed exposure should be considered to exceed the limit value. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level. Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

(c) Hearing conservation program.

(c)(1) The employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent. For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.

(c)(2) For purposes of paragraphs (c) through (n) of this section, an 8-hour time-weighted average of 85 decibels or a dose of fifty percent shall also be referred to as the action level.

(d) Monitoring.

(d)(1) When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall develop and implement a monitoring program.

(d)(1)(i) The sampling strategy shall be designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.

(d)(1)(ii) Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the employer shall use representative personal sampling to comply with the monitoring requirements of this paragraph unless the employer can show that area sampling produces equivalent results.

(d)(2)

(d)(2)(i) All continuous, intermittent and impulsive sound levels from 80 decibels to 130 decibels shall be integrated into the noise measurements.

(d)(2)(ii) Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.

(d)(3) Monitoring shall be repeated whenever a change in production, process, equipment or controls increases noise exposures to the extent that:

(d)(3)(i) Additional employees may be exposed at or above the action level; or

(d)(3)(ii) The attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet the requirements of paragraph (j) of this section.

(e) Employee notification.

The employer shall notify each employee exposed at or above an 8-hour time-weighted average of 85 decibels of the results of the monitoring.

(f) Observation of monitoring.

The employer shall provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to this section.

(g) Audiometric testing program.

(g)(1) The employer shall establish and maintain an audiometric testing program as provided in this paragraph by making audiometric testing available to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels.

(g)(2) The program shall be provided at no cost to employees.

(g)(3) Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining and checking calibration and proper functioning of the audiometers being used. A technician who operates microprocessor audiometers does not need to be certified. A technician who performs audiometric tests must be responsible to an

audiologist, otolaryngologist or physician.

(g)(4) All audiograms obtained pursuant to this section shall meet the requirements of Appendix C: "Audiometric Measuring Instruments."

(g)(5) "Baseline audiogram."

(g)(5)(i) Within 6 months of an employee's first exposure at or above the action level, the employer shall establish a valid baseline audiogram against which subsequent audiograms can be compared.

(g)(5)(ii) "Mobile test van exception." Where mobile test vans are used to meet the audiometric testing obligation, the employer shall obtain a valid baseline audiogram within 1 year of an employee's first exposure at or above the action level. Where baseline audiograms are obtained more than 6 months after the employee's first exposure at or above the action level, employees shall wearing hearing protectors for any period exceeding six months after first exposure until the baseline audiogram is obtained.

(g)(5)(iii) Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise.

(g)(5)(iv) The employer shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

(g)(6) "Annual audiogram." At least annually after obtaining the baseline audiogram, the employer shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.

(g)(7) "Evaluation of audiogram."

(g)(7)(i) Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift as defined in paragraph (g)(10) of this section has occurred. This comparison may be done by a technician.

(g)(7)(ii) If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.

(g)(7)(iii) The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. The employer shall provide to the person performing this evaluation the following information:

(g)(7)(iii)(A) A copy of the requirements for hearing conservation as set forth in paragraphs (c) through (n) of this section;

(g)(7)(iii)(B) The baseline audiogram and most recent audiogram of the employee to be evaluated;

(g)(7)(iii)(C) Measurements of background sound pressure levels in the audiometric test room as required in Appendix D: Audiometric Test Rooms.

(g)(7)(iii)(D) Records of audiometer calibrations required by paragraph (h)(5) of this section.

(g)(8) "Follow-up procedures."

(g)(8)(i) If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift as defined in paragraph (g)(10) of this section has occurred, the employee shall be informed of this fact in writing, within 21 days of the determination.

(g)(8)(ii) Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that the following steps are taken when a standard threshold shift occurs:

(g)(8)(ii)(A) Employees not using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them.

(g)(8)(ii)(B) Employees already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.

(g)(8)(ii)(C) The employee shall be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.

(g)(8)(ii)(D) The employee is informed of the need for an otological examination if a medical pathology of the ear that is unrelated to the use of hearing protectors is suspected.

(g)(8)(iii) If subsequent audiometric testing of an employee whose exposure to noise is less than an 8-hour TWA of 90 decibels indicates that a standard threshold shift is not persistent, the employer:

(g)(8)(iii)(A) Shall inform the employee of the new audiometric interpretation; and

(g)(8)(iii)(B) May discontinue the required use of hearing protectors for that employee.

(g)(9) "Revised baseline." An annual audiogram may be substituted for the baseline audiogram when, in the judgment of the audiologist, otolaryngologist or physician who is evaluating the audiogram:

(g)(9)(i) The standard threshold shift revealed by the audiogram is persistent; or

(g)(9)(ii) The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.

(g)(10) "Standard threshold shift."

(g)(10)(i) As used in this section, a standard threshold shift is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

(g)(10)(ii) In determining whether a standard threshold shift has occurred, allowance may be made for the contribution of aging (presbycusis) to the change in hearing level by correcting the annual audiogram according to the procedure described in Appendix F: "Calculation and Application of Age Correction to

Audiograms."

(h) Audiometric test requirements.

(h)(1) Audiometric tests shall be pure tone, air conduction, hearing threshold examinations, with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000, and 6000 Hz. Tests at each frequency shall be taken separately for each ear.

(h)(2) Audiometric tests shall be conducted with audiometers (including microprocessor audiometers) that meet the specifications of, and are maintained and used in accordance with, American National Standard Specification for Audiometers, S3.6-1969, which is incorporated by reference as specified in Sec. 1910.6.

(h)(3) Pulsed-tone and self-recording audiometers, if used, shall meet the requirements specified in Appendix C: "Audiometric Measuring Instruments."

(h)(4) Audiometric examinations shall be administered in a room meeting the requirements listed in Appendix D: "Audiometric Test Rooms."

(h)(5) "Audiometer calibration."

(h)(5)(i) The functional operation of the audiometer shall be checked before each day's use by testing a person with known, stable hearing thresholds, and by listening to the audiometer's output to make sure that the output is free from distorted or unwanted sounds. Deviations of 10 decibels or greater require an acoustic calibration.

(h)(5)(ii) Audiometer calibration shall be checked acoustically at least annually in accordance with Appendix E: "Acoustic Calibration of Audiometers." Test frequencies below 500 Hz and above 6000 Hz may be omitted from this check. Deviations of 15 decibels or greater require an exhaustive calibration.

(h)(5)(iii) An exhaustive calibration shall be performed at least every two years in accordance with sections 4.1.2; 4.1.3.; 4.1.4.3; 4.2; 4.4.1; 4.4.2; 4.4.3; and 4.5 of the American National Standard Specification for Audiometers, S3.6-1969. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this calibration.

(i) Hearing protectors.

(i)(1) Employers shall make hearing protectors available to all employees exposed to an 8-hour time-weighted average of 85 decibels or greater at no cost to the employees. Hearing protectors shall be replaced as necessary.

(i)(2) Employers shall ensure that hearing protectors are worn:

(i)(2)(i) By an employee who is required by paragraph (b)(1) of this section to wear personal protective equipment; and

(i)(2)(ii) By any employee who is exposed to an 8-hour time-weighted average of 85 decibels or greater, and who:

(i)(2)(ii)(A) Has not yet had a baseline audiogram established pursuant to paragraph (g)(5)(ii); or

(i)(2)(ii)(B) Has experienced a standard threshold shift.

(i)(3) Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by the employer.

(i)(4) The employer shall provide training in the use and care of all hearing protectors provided to employees.

(i)(5) The employer shall ensure proper initial fitting and supervise the correct use of all hearing protectors.

(j) Hearing protector attenuation.

(j)(1) The employer shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. The employer shall use one of the evaluation methods described in Appendix B: "Methods for Estimating the Adequacy of Hearing Protection Attenuation."

(j)(2) Hearing protectors must attenuate employee exposure at least to an 8-hour time-weighted average of 90 decibels as required by paragraph (b) of this section.

(j)(3) For employees who have experienced a standard threshold shift, hearing protectors must attenuate employee exposure to an 8-hour time-weighted average of 85 decibels or below.

(j)(4) The adequacy of hearing protector attenuation shall be re-evaluated whenever employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation. The employer shall provide more effective hearing protectors where necessary.

(k) Training program.

(k)(1) The employer shall institute a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 decibels, and shall ensure employee participation in such program.

(k)(2) The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes.

(k)(3) The employer shall ensure that each employee is informed of the following:

(k)(3)(i) The effects of noise on hearing;

(k)(3)(ii) The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care; and

(k)(3)(iii) The purpose of audiometric testing, and an explanation of the test procedures.

(l) Access to information and training materials.

(l)(1) The employer shall make available to affected employees or their representatives copies of this standard and shall also post a copy in the workplace.

(l)(2) The employer shall provide to affected employees any informational materials pertaining to the standard that are supplied to the employer by the Assistant Secretary.

(l)(3) The employer shall provide, upon request, all materials related to the employer's training and education program pertaining to this standard to the Assistant Secretary and the Director.

(m) Recordkeeping.

(m)(1) "Exposure measurements." The employer shall maintain an accurate record of all employee exposure measurements required by paragraph (d) of this section.

(m)(2) "Audiometric tests."

(m)(2)(i) The employer shall retain all employee audiometric test records obtained pursuant to paragraph (g) of this section:

(m)(2)(ii) This record shall include:

(m)(2)(ii)(A) Name and job classification of the employee;

(m)(2)(ii)(B) Date of the audiogram;

(m)(2)(ii)(C) The examiner's name;

(m)(2)(ii)(D) Date of the last acoustic or exhaustive calibration of the audiometer; and

(m)(2)(ii)(E) Employee's most recent noise exposure assessment.

(m)(2)(ii)(F) The employer shall maintain accurate records of the measurements of the background sound pressure levels in audiometric test rooms.

(m)(3) "Record retention." The employer shall retain records required in this paragraph (m) for at least the following periods.

(m)(3)(i) Noise exposure measurement records shall be retained for two years.

(m)(3)(ii) Audiometric test records shall be retained for the duration of the affected employee's employment.

(m)(4) "Access to records." All records required by this section shall be provided upon request to employees, former employees, representatives designated by the individual employee, and the Assistant Secretary. The provisions of 29 CFR 1910.20 (a)-(e) and (g)-

(m)(4)(i) apply to access to records under this section.

(m)(5) "Transfer of records." If the employer ceases to do business, the employer shall transfer to the successor employer all records required to be maintained by this section, and the successor employer shall retain them for the remainder of the period prescribed in paragraph (m)(3) of this section.

(n) Appendices.

(n)(1) Appendices A, B, C, D, and E to this section are incorporated as part of this section and the contents of these appendices are mandatory.

(n)(2) Appendices F and G to this section are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

(o) "Exemptions." Paragraphs (c) through (n) of this section shall not apply to employers engaged in oil and gas well drilling and servicing operations.

(p) "Startup date." Baseline audiograms required by paragraph (g) of this section shall be completed by March 1, 1984.

Copies of the Appendices and other OSHA standards are available free of charge at the OSHA website at www.osha.gov